

Gelatin

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Gelatin or animal jelly, foodstuff obtained from connective tissue (found in hoofs, bones, tendons, ligaments, and cartilage) of vertebrate animals by the action of boiling water or dilute acid. It is largely composed of denatured collagen, a protein particularly rich in the amino acids proline and hydroxyproline. The process of manufacture is a complex one that involves removing foreign substances, boiling the material (usually in distilled water in aluminum vessels to prevent contamination), and purifying it of all chemicals used in freeing the gelatin from the connective tissues. The final product in its purest form is brittle, transparent, colorless, tasteless, and odorless and has the distinguishing property of dissolving in hot water and congealing when cold. In contact with cold water it takes up from 5 to 10 times its own weight and swells to an elastic, transparent mass. Gelatin, being readily digested and absorbed, is a good food for children and invalids. It is important in fine cookery as a vehicle for other materials, in the form of jellied soups, molded meats and salads, and frozen desserts. Preparations of it are used in the home manufacture of jam, jellies, and preserves to ensure jellification of fruit juices. It is used in the drying and preserving of fruits and meats, in the glazing of coffee, and in the preparation of powdered milk and other powdered foods. Bakeries use it in making meringues, eclairs, and other delicacies. In confectionery making it is used as the basis of taffy, nougat, marshmallows, and fondant. Ice cream manufacture employs it to maintain a permanent emulsion of other ingredients and thus to give body to the finished product. In scientific processes gelatin is widely employed, being used in electrotyping, photography, waterproofing, and dyeing, and in coating microscopic slides. It is used as a culture medium for bacteriological research and also to make coatings for pills and capsules, for court plaster, and for some surgical dressings. It affords a base for ointments and pastes, such as toothpaste; it is an emulsifying agent useful in making liquid combinations and various sprays. In its less pure forms gelatin is known as glue and size. Vegetable gelatin, or agar, is derived from East Indian seaweeds.

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